

IN THE CLAIMS:

Please cancel without prejudice or disclaimer claims 1-12 in the underlying PCT application and ADD new claims 13-24 in accordance with the following:

Claims 1-12 (canceled)

13. (new) A method for allocating radio communication resources in radio cells of a cellular radio communication system having a plurality of user stations and network units, comprising:

dividing a frequency band into a plurality of sub-carriers used in the radio communication system for communication purposes, by dividing the frequency band into a number of sub-bands, each sub-band including at least one sub-carrier, so that the number of the sub-bands is different in at least two of the radio cells;

dividing the user stations into a number of groups; and

allocating each group of the user stations to one of the sub-bands for communication.

14. (new) A method in accordance with claim 13, further comprising determining the number of sub-bands depending on transmission conditions in each of the at least two radio cells.

15. (new) A method in accordance with claim 14, wherein the transmission conditions are transmission capacities of the at least one sub-carrier in each of the radio cells.

16. (new) A method in accordance with claim 15, further comprising determining the transmission conditions by at least one of at least one user station and at least one network unit based on measured signal-to-noise ratios.

17. (new) A method in accordance with claim 13, wherein said determining of the number of sub-bands for each of the at least two radio cells takes into consideration data transmission made possible subsequently by said dividing of the frequency band into sub-bands, said dividing of the user stations into groups and said allocating of each group to the one of the sub-bands.

18. (new) A method in accordance with claim 13, wherein said dividing into the sub-bands and the groups and said allocating of each group to the one of the sub-bands comprises in order to increase transmission capacity:

starting from the transmission capacity of an initial constellation of said dividing into the sub-bands and the groups and said allocating of each group to the one of the sub-bands; and

calculating the transmission capacity of a modified constellation of said dividing into the sub-bands and the groups and said allocating of each group to the one of the sub-bands.

19. (new) A method in accordance with claim 18, further comprising forming the modified constellation from the initial constellation by at least one of

swapping at least one user station of a first group with at least one other user station of a second group while said dividing into the sub-bands said allocating of each group to the one of the sub-bands remains unchanged; and

swapping at least one sub-carrier of a first sub-band with at least one other sub-carrier of a second sub-band while said dividing into the groups and said allocating of each group to the one of the sub-bands remains unchanged.

20. (new) A method in accordance with claim 18, wherein said determining of the number of sub-bands for each of the at least two radio cells achieves at least one of a predetermined increase in the transmission capacity and a predetermined transmission capacity in the at least two radio cells.

21. (new) A method in accordance with claim 13, further comprising, after said allocating of each group to the one of the sub-bands, spreading data using codes on at least some sub-carriers of the one of the sub-bands.

22. (new) A method in accordance with claim 13, wherein signals transmitted after said allocating of each group to the one of the sub-bands on at least partly same sub-carriers, can be distinguished from each other by spatial propagation thereof.

23. (new) A network unit for a radio cell of a cellular radio communication system having a plurality of user stations, and a frequency band divided into a plurality of sub-carriers being used in the radio communication system for communication, said network unit comprising:

means for defining a number of sub-bands depending on transmission conditions in the radio cell;

means for dividing the frequency band into the number of sub-bands each having at least one sub-carrier;

means for dividing user stations into a number of groups; and

means for allocating each group to one of the sub-bands.

24. (new) A computer readable medium storing a program that when executed controls a network unit for a radio cell of a cellular radio communication system, having a plurality of user stations, to perform a method comprising:

defining a number of sub-bands depending on transmission conditions in the radio cell;

dividing the frequency band into the number of sub-bands each having at least one sub-carrier,

dividing user stations into a number of groups; and

allocating each group to one of the sub-bands.